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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/173,422 10/15/98 ALMEIDA

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EXAMINER

FARAH, A

ART UNIT

PAPER NUMBER

3739

2

DATE MAILED:

05/24/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/173,422

Applicant(s)
Stephen Almeida

Examiner
Ahmed Farah

Group Art Unit
3739



- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 1-12 is/are pending in the application.
- Of the above, claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-3, 5, 6, 9, and 10 is/are rejected.
- ☒ Claim(s) 4, 7, 8, 11, and 12 is/are objected to.
- ☐ Claims _____ are subject to restriction or election requirement.

Application Papers

- ☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☒ Notice of References Cited, PTO-892
- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☒ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 3 recites the limitation "said wavelength" in line 1. There is insufficient antecedent basis for this limitation in the claim.
4. Claim 6 recites the limitation "said total electrical supply energy to the flash lamp" in lines 1 through 2. There is insufficient antecedent basis for this limitation in the claim.

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5. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 10 recites the broad recitation ***an output between 610 nm and 1200 nm***, and the claim also recites ***said output is within the range of 725 nm to 925 nm*** which is the narrower statement of the range/limitation.

6. Claim 11 recites the limitation "the device of claim 7" in line 1. There is insufficient antecedent basis for this limitation in the claim.

7. Claim 12 recites the limitation "the device of claim 7" in line 1. There is insufficient antecedent basis for this limitation in the claim.

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Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tankovich et al., (U.S. Pat. No. 6,050,990) in view of Eckhouse et al., (U.S. Pat. No. 5,849,029). Tankovich discloses a method and device for inhibiting hair growth and related skin treatment. Tankovich's hair removal method includes: a) applying laser light into skin section to be treated and b) controlling photothermal damage of said skin section by selection of laser parameters and by dynamic cooling of the skin surface. In addition, Tankovich teaches that the cooling effect can be accomplished by applying a continuous spray of ice water or other coolant to the skin surface (see Tankovich, Col. 65, lines 37-53). Also, Tankovich teaches that hair may be shaved before treatment (see Tankovich, Col. 48, lines 4-8). Tankovich's device comprises a hollow reflective light guide 48 placed against the skin surface 12 and forming an optical seal wherein said light guide has an aperture 64 located at its apex through which incident light 66 passes. In reference to claim 9, Tankovich Fig. 25c clearly shows the use of transparent contact-window 44 placed atop the skin surface 12. Table 5 of Tankovich teaches that a transparent plastic, glass, quartz, fused silica, or polymeric material can be used to make this window. Thus, it is

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known in the art that these materials could be used to filter an incoming light in order to transmit selected wavelengths. However, although Tankovich discloses the use of flash lamp as an alternative source to laser treatment, he does not teach a hair removal method by using flash lamp as a light source. Eckhouse teaches a method for controlling the thermal profile of the skin when electromagnetic radiation is used to treat a variety of skin disorders such as vascular and pigmented lesions, hair removal, skin rejuvenation, etc. Eckhouse, Fig. 2 discloses one embodiment of his invention including: a) radiation source 24 for emitting electromagnetic radiation, b) reflector 26, containing the light source, for reflecting the radiation toward treatment site 28, c) light guide 30 for directing and transmitting the radiation toward the treatment site, d) window 12 for transmitting the therapeutic wavelengths toward the treatment site, e) cooling channel 14, and f) radiation filter 32 for restricting the radiation transmitted to the therapeutic radiation wavelengths while simultaneously conducting thermal energy from the skin. Eckhouse, Col. 5, lines 34-38 teach that the radiation source 24 is a flash lamp that emits a incoherent radiation in a broad spectrum. Further, Eckhouse teaches that cooling channel 14 is designed to contain coolant, and coolant typically includes a high heat capacity fluid such as water. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the applicants' invention to modify Tankovich's invention in view of Eckhouse to have a flash lamp as the treatment light source in order minimize the damage that may be caused by the laser light to the tissue and skin surrounding the treatment site.

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10. Claims 2, 3, 5, 6, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tankovich et al., (U.S. Pat. No. 6,050,990) in view of Eckhouse et al., (U.S. Pat. No. 5,849,029) as applied to claims 1 and 9 above, and further in view of Fullmer et al., (U.S. Pat. No. 5,885,274). Tankovich and Eckhouse are described above. However, neither Tankovich nor Eckhouse teaches the pulse width and the wavelength range of the treatment radiation, or the electrical energy supplied to the light source. Fullmer discloses a filament lamp for dermatological treatment wherein the application of this apparatus and method include the thermal destruction of hair follicles for the purpose of hair removal, among others. In reference to claim 5, Col. 7, lines 49-53 of Fullmer teach that the pulse width of the flash lamp can be adjusted between at least 10 and about 1000 ms to match the thermal relaxation time of the target tissue. In reference to claim 6, Table 2 of Fullmer shows the input electrical energy range (40 - 195 J) supplied to the filament. In regard to claims 2, 3 and 10, Col. 7, lines 54-57 of Fullmer teach that a filter system can be configured to allow treatment of hair follicles with a light spectrum between about 700 nm to $1\mu\text{m}$. Therefore, it would have been obvious to one having the ordinary skill in the art at the time of the applicant's invention to modify Tankovich's invention in view of Eckhouse and Fullmer, and use a broader range of light spectra in order to have a pulse geometry which is effective on a broad size of hair follicles.

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Allowable Subject Matter

11. Claims 4, 7, 8, 11, and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See the following references:

- | | |
|---------------------|---------------------------|
| 1. Coleman et al. | (U.S. Pat. No. 5,628,744) |
| 2. Waldman et al. | (U.S. Pat. No. 5,868,732) |
| 3. Anderson et al. | (U.S. Pat. No. 5,735,844) |
| 4. Tankovich et al. | (U.S. Pat. No. 7,552,948) |
| 5. Tankovich et al. | (U.S. Pat. No. 5,752,949) |
| 6. Mehl, Sr. et al. | (U.S. Pat. No. 5,766,214) |
| 7. Miller | (U.S. Pat. No. 5,630,811) |
| 8. Zavislan et al. | (U.S. Pat. No. 5,632,741) |
| 9. Zaias et al. | (U.S. Pat. No. 5,647,866) |

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Farah whose telephone number is (703)305-5787.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Linda Dvorak, can be reached on (703) 308-0994. The fax number for this Group is (703)305-3590.

A handwritten signature in black ink, appearing to read 'Linda C. M. Dvorak', with a large, stylized loop at the end.

LINDA C. M. DVORAK
SUPERVISORY PATENT EXAMINER
GROUP 3700